



## **WATER RESOURCES RESEARCH GRANT PROPOSAL**

**Project ID:** 2005CT76B

**Title:** Gonadal Deformities in Connecticut Amphibians

**Project Type:** Research

**Focus Categories:** Ecology, Toxic Substances, Surface Water

**Keywords:** amphibian, chemical contaminants, developmental abnormality, sentinel study

**Start Date:** 03/01/2005

**End Date:** 02/28/2006

**Federal Funds:** \$18,401

**Non-Federal Matching Funds:** \$37,637

**Congressional District:** 3

**Principal Investigator:**

David Skelly  
Yale University

### **Abstract**

Human development exposes freshwater wetlands to a wide variety of contaminants whose effects are difficult to calibrate. Wildlife sentinel studies offer a new approach to estimating effects of contaminants on environmental health. We propose a state-wide study of amphibians living in wetlands found in urban, suburban, agricultural and undeveloped landscapes. The motivation for our study is recent evidence that wild amphibian populations can suffer extremely high rates of gonadal abnormalities (up to 92% of individuals within a population). High rates of affliction coupled with the severity of effects, including hermaphroditism, have garnered wide attention from the public and from the regulatory community. Existing studies have been conducted in the Midwestern United States. Data from the northeast are lacking. The purpose of this study is to fill this gap and to provide the foundation for future studies focused on characterizing mechanisms underlying observed abnormalities.